

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A ~~computer-implemented~~ method for approximating ~~an n-band graphic equalizer having~~ n-band graphic equalizer settings ~~associated with~~ ~~for~~ a media ~~item player~~ using not more than m ~~predetermined filter types, wherein each filter type is characterized as having a known frequency response shape filters~~, where m is less than n, said method comprising:

(a) classifying ~~the n-band graphic equalizer settings by comparing a composite frequency response shape representing the n-band graphic equalizer settings at least a plurality of the equalizer setting values with respect to characteristics of~~ at least a portion of ~~a~~ ~~the~~ frequency response shape of one or more of a plurality of predetermined filter types;

(b) determining parameters for the one or more ~~of the filters of the plurality of~~ predetermined filter types used ~~to in~~ classifying the equalizer settings;

(c) assigning a priority to each of the one or more ~~predetermined filter types filters used~~ in the classification ~~wherein the assigned priority is based on weighting values associated with each of the one or more predetermined filter types~~; and

(d) ~~selecting no more than m predetermined filter types having the highest priority limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification.~~

2-3. (Cancelled)

4. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein n = 10.

5. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein m is no more than three.

6. (Cancelled)

7. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric.

8. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 7, wherein the predetermined filter types in the classification include not more than one low-shelf and not more than one high-shelf.

9. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein the classification approximates the equalizer setting values through use of a minimum number of the predetermined filter types.

10. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein the predetermined filter types are second order recursive filters.

11. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 1, wherein the filters are digital filters.

12. (Cancelled)

13. (Currently Amended) A ~~computer-implemented~~ method for approximating n-band graphic equalizer settings associated with a media item for a media player using less than n filters, said method comprising:

- (a) examining the equalizer setting values for approximate correlation to at least a portion of a frequency response of a shelf type filter;
- (b) selecting the shelf type filter if a first set of the equalizer setting values approximately correlate;
- (c) examining the equalizer setting values other than the first set for approximate correlation to at least a portion of a frequency response of a parametric type filter;
- (d) selecting the parametric type filter if a second set of the equalizer settings approximately correlate; and
- (e) determining parameters for the shelf type filter and the parametric type filter, wherein at least the shelf type filter and the parametric type filter are used to approximate the n-band graphic equalizer settings for the media player.

14. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 13, wherein said method approximates the n-band graphic equalizer settings for the media item player using not more than m of the filters.

15. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 13, wherein the filters are digital filters.

16. (Currently Amended) A ~~computer-implemented~~ method as recited in claim 13, wherein the equalizer settings within the first set are adjacent one another, and wherein the equalizer settings within the second set are adjacent one another.

17. (Cancelled)

18. (Currently Amended) A computer readable medium including at least computer program code executable by a processor for approximating an n-band graphic equalizer having n-band graphic equalizer settings for a computing device using not more than m predetermined filter types, wherein each predetermined filter type is characterized as having a known frequency response shape filters, wherein m is less than n, said computer readable medium comprising:

(a) computer program code for classifying the n-band graphic equalizer settings by comparing a composite frequency response shape representing the n-band graphic equalizer settings at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of the a frequency response shape of one or more of the a plurality of predetermined filter types;

(b) computer program code for determining parameters for the one or more of the filters of the plurality of predetermined filter types used to in classifying the equalizer settings;

(c) computer program code for assigning a priority to each of the one or more predetermined filter types used filters in the classification wherein the assigned priority

is based on weighting values associated with each of the one or more of the predetermined filter types; and

(d) computer program code for selecting no more than m predetermined filter types having the highest priority limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification.

19-21. (Cancelled)

22. (Original) A computer readable medium as recited in claim 18, wherein the predetermined filter types in the classification are chosen from the group consisting of: a low-shelf, a high-shelf and a parametric.

23. (Currently Amended) A system for approximating an n-band graphic equalizer using not more than m filters, where m is less than n, for use on a device having limited computational resources or computational time, said system comprising:

(a) means for classifying the n-band graphic equalizer settings by comparing a composite frequency response shape representing the n-band graphic equalizer settings at least a plurality of the equalizer setting values with respect to characteristics of at least a portion of a the frequency response shape of one or more of the a plurality of predetermined filter types;

(b) means for determining parameters for the one or more of the filters of the plurality of predetermined filter types used to in classifying the equalizer settings;

(c) means for assigning a priority to each of the one or more predetermined filter types filters used in the classification wherein the assigned priority is based on weighting values associated with each of the one or more predetermined filter types; and

(d) means for selecting no more than m predetermined filter types having the highest priority limiting the number of the one or more filters in the classification to not more than m based on the priority assigned to each of the plurality of the predetermined filter types in the classification.

24. (Original) A system as recited in claim 23, wherein said system is an embedded system.

25. (Original) A system as recited in claim 23, wherein the system is a portable computing device.

26. (Original) A system as recited in claim 23, wherein the system is a hand-held media player.

27. (Currently Amended) A media device, comprising:

 a data store for storing media data received from a host computer, the media data including media content and equalizer setting information for at least one media item; and
 a processor operatively connected to said data store, said processor operates to acquire n-band equalizer setting values based on the equalizer setting information, to approximate the n-band equalizer setting values with a reduced filter order approximation by:

 (a) classifying the n-band graphic equalizer settings by comparing a composite frequency response shape representing the n-band graphic equalizer settings at least a plurality of the equalizer setting values with respect to characteristics of at least a portion

of ~~a~~ the frequency response shape of one or more of the a plurality of predetermined filter types;

- (b) determining parameters for the one or more of the filters of the plurality of predetermined filter types used to in classifying the equalizer settings;
- (c) assigning a priority to each of the one or more predetermined filter types filters used in the classification wherein the assigned priority is based on weighting values associated with each of the one or more predetermined filter types; and
- (d) selecting no more than m predetermined filter types having the highest priority limiting the number of the one or more filters in the classification to not more than m, where m is less than n, based on the priority assigned to each of the plurality of the predetermined filter types in the classification, and to present the media content at said media player in accordance with the reduced filter order approximation.

28. (Original) A media device as recited in claim 27, wherein said data store comprises a hard drive that stores the media data.

29. (Original) A media device as recited in claim 27, wherein said media device is a handheld media player.